MiniBooNE (Anti-Neutrino Mode)

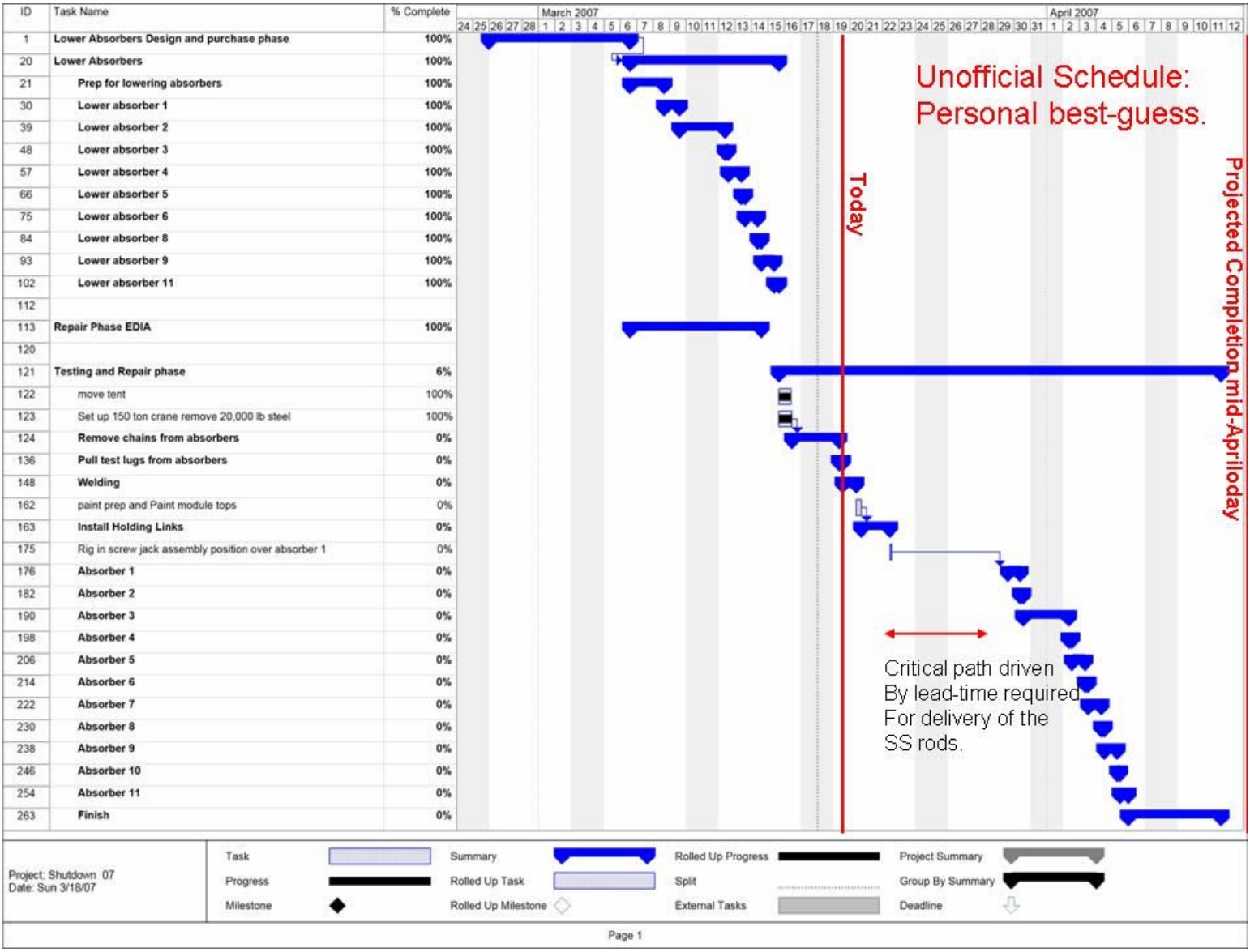
All Experimenter's Meeting

March 19, 2007

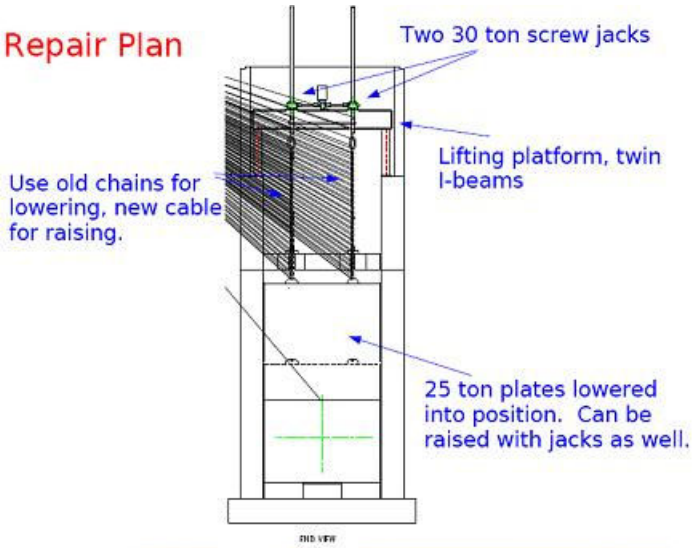
Ray Stefanski

Brief summary of beam-off condition:

- The Booster Neutrino Beam was shutdown on December 31, 2006;
- Investigation of the 25M enclosure discovered 2 modules had fallen into the beam;
- Further study revealed that hydrogen embrittlement caused the chains to fail; No chlorine was found, suggesting that SS would be a good replacement.
- The AD developed a recovery strategy that was set in motion on March 7;
- The 1st phase of the recovery – lowering all 11 modules – was complete on March 15; Many thanks to:
  - Mike Andrews and AD repair team,
  - specifically Pat Hurh and Joel Misek for design of the screw jack lifting device and lifting procedures;
  - John Featherstone and crew for onsite effort to efficiently and safely lower the modules.
- The 2nd phase has begun with the removal of the main member in the supporting structure;
- The critical path to completion is the lead-time for delivery of the SS rods.


ID
Task Name
% Complete
March 2007
April 2007
1 Lower Absorbers Design and purchase phase 100%
20 Lower Absorbers 100%
21 Prep for lowering absorbers 100%
30 Lower absorber 1 100%
39 Lower absorber 2 100%
48 Lower absorber 3 100%
57 Lower absorber 4 100%
66 Lower absorber 5 100%
75 Lower absorber 6 100%
84 Lower absorber 8 100%
93 Lower absorber 9 100%
102 Lower absorber 11 100%
112
113 Repair Phase EDIA 100%
120
121 Testing and Repair phase 6%
122 move tent 100%
123 Set up 150 ton crane remove 20,000 lb steel 100%
124 Remove chains from absorbers 0%
136 Pull test lugs from absorbers 0%
148 Welding 0%
162 paint prep and Paint module tops 0%
163 Install Holding Links 0%
175 Rig in screw jack assembly position over absorber 1 0%
176 Absorber 1 0%
182 Absorber 2 0%
190 Absorber 3 0%
198 Absorber 4 0%
206 Absorber 5 0%
214 Absorber 6 0%
222 Absorber 7 0%
230 Absorber 8 0%
238 Absorber 9 0%
246 Absorber 10 0%
254 Absorber 11 0%
263 Finish 0%
Unofficial Schedule:
Personal best-guess.
Today
Projected Completion mid-Apriloday
Critical path driven
By lead-time required
For delivery of the
SS rods.
Project: Shutdown 07
Date: Sun 3/18/07
Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Deadline
Page 1

Repair Plan


Two 30 ton screw jacks
Lifting platform, twin I-beams
Use old chains for lowering, new cable for raising.
25 ton plates lowered into position. Can be raised with jacks as well.

Goals for the remainder of the running period:

- Repair the 25M absorber. Setup for 50M absorber run.
  - 1st phase is complete thanks to AD.
  - The schedule aims for a completion date in mid-April.

- Collect 0.6 to 0.9×10^{20} PoT in $\bar{\nu}$ mode.

  Totals to date:

  – 0.2×10^{20} PoT with no absorber interference;

  – 0.7×10^{20} PoT with absorber #10 down;

  – 0.6×10^{20} PoT with absorber #10 and #7 down.

- Continue $\bar{\nu}$ analysis:

  CCQE; π^0 production; and Neutral Current interactions.